TOWN OF

DARIEN, CONNECTICUT

EMERGENCY OPERATIONS PLAN

ANNEX "J"

RADIOLOGICAL PROTECTION

Revision 2

Approved By:

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Darien Emergency Management

Date

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RECORD OF ANNEX REVISIONS AND CHANGES

Rev. #	Change #	Description of Revision/Change	Effective Date
1	N/A	All previous editions of this Annex to EOP	02/97
2	1	Revised Annex to EOP	08/02

FEMA PLANNING CRITERIA

The Federal Emergency Management Agency (FEMA) has issued State and Local Guide (SLG) 101, "Guide for All-Hazard Emergency Operations Planning," which the Emergency Operations Plan (EOP) and this Annex are in conformance with.

I. INTRODUCTION

This document is the Radiological Protection Annex to the local Emergency Operations Plan.

A. Purpose

The purpose of this Radiological Protection Annex is to provide for the necessary organized effort to minimize and remediate the effects of radiation on people and resources through: detection, evaluation of the hazard, and implementation of protective measures.

B. Authority

The authority for this Radiological Protection Annex to the Emergency Operations Plan (EOP) is found in Item VII of the Darien Emergency Operations Plan (EOP).

C. Hazard Analysis for Radiation

The hazard analysis for the Radiological Protection Annex portion of the basic EOP is prepared and maintained as a separate document and is incorporated by reference as part of this EOP Annex.

D. References

Various general references have been used in the preparation of this EOP Radiation Protection Annex and are identified in the respective hazard specific appendices.

II. SITUATION AND ASSUMPTIONS

A. Situation

1. In this dangerous world, there exists a potential for conditions to make themselves present, which would constitute the declaration of a National Security Emergency. Under such conditions, the need for detection and measurement of the radiation hazard may become vital to protect the health and safety of the public and to maintain continuity of government.

2. Various radioactive materials are transported into, out of, and through the state. There is a realistic possibility for an occurrence of incidents or accidents during the transportation and use of these materials.

Even though it is unlikely that such events pose a serious threat to the health and safety of the people of the this state; it is necessary that the state and local governments be able to: detect radiation, assess the seriousness of the threat, and take appropriate protective and remedial actions.

3. The use of radiological materials for commercial nuclear power production warrants emergency preparedness planning in the event that such facilities experience an accident, which releases, or threatens to release, radioactive materials into the environment.

   Currently there are commercial nuclear power plants in and near the state which could pose a threat in the event of such an uncontrolled release to the environment. They are:

   a. Millstone II & III

      (located in Waterford, CT)

   b. Indian Point II & III

      (located in Indian Point, NY)
      Ingestion Pathway *****

4. In addition to the commercial nuclear power generating plants, there exist several industrial, research, military, and military support facilities within the state. These facilities operate smaller fixed or mobile reactors. A list of these facilities follows:

   a. General Dynamics, Electric Boat Division (located in Groton, CT)

   b. U.S. Navy Submarine Base (located in New London, CT)

   Separate hazard specific plans have been developed, and are maintained to address these possible hazards.

   * Indicates facility(s) who's EPZ(s) effect Darien, CT.

B. Assumptions

1. In the event of a National Security Emergency, response to, and recovery from a widespread and uncontrolled radiological environment could be necessary. These conditions would require that the majority of initial warnings, guidance, and protective measures be taken at the state and local levels of government.

2. In the event of a serious peacetime radiological emergency, this town would receive assistance from the state, and federal governments, neighboring states and local jurisdictions, and from the commercial nuclear power industry if applicable. All of these organizations have, in place, highly sophisticated capabilities for: detecting, measuring, and monitoring radiation.

3. The state and federal governments will provide technical guidance and assistance in the development, implementation and maintenance of this Annex.

III. ORGANIZATION AND RESPONSIBILITIES

A. Organization

The organization for response to a radiological emergency condition is dependent upon the type of hazard causing the emergency condition. Identification of the hazard will dictate the appropriate hazard-specific appendix to be used from this Annex.

B. Responsibilities

Specific responsibilities for responding to a radiological emergency are identified in the appropriate hazard-specific appendices to this Annex.

Representative responsibilities which may be found in such appendices include the following elements:

1. Coordination of response activities.
2. Establishment of data analysis
3. Damage estimation and assessment
4. Provision for radiation monitoring equipment
5. Provision for monitoring and decontamination of personnel and equipment.
6. Establishment of comprehensive personnel training programs for emergency response personnel.

C. Administration and Logistics

1. The State and local Offices of Emergency Management are responsible for coordination of the logistical matters regarding: development, implementation, and maintenance of this EOP Annex and its hazard-specific Appendices.

2. The administration of the EOP Radiological Protection Annex is performed by the local Emergency Management Director or designee.

D. Annex and Appendices Development and Maintenance

1. This Annex to the Emergency Operations Plan has been developed and is maintained jointly by the State and local Offices of Emergency Management.

2. The local Office of Emergency Management Director, or designee, is responsible for coordinating, ensuring the development of, and maintenance of this Emergency Operations Plan Annex and its hazard specific appendices. The state has provided this model Annex, and will assist the town in adapting it to each local special situation.

3. All departments and agencies within the town, with either primary or support function(s) emergency management responsibilities assigned to them, will develop appropriate implementation plans and procedures for carrying out their assigned responsibilities and duties. (see Table IV-1)

IV. CONCEPT OF OPERATIONS

A. General

1. The Emergency Operations Plan serves as the overall local planning document for the coordination of preparedness and emergency response activities for all human caused, national security or natural hazards.

2. The management of radiological emergencies involves three critical activities, as follows:

a. environmental surveillance
b. personnel radiation exposure control
c. protective measures

Each hazard specific appendix includes the following planning elements:

a. plans and procedures
b. facilities
c. equipment
d. trained personnel

3. Coordination of emergency response to an identified radiological emergency is accomplished by a "LEAD AGENCY." This lead agency assumes the direction and control function for that emergency response.

   The lead agency is supported by various support agencies as provided in the each hazard specific appendix.

   Table IV-1 of this Annex identifies the functional primary and support roles of various agencies for identified types of radiation hazards.

B. Execution

1. Lead Agency

   Depending on the type and scope of a radiological emergency condition, the emergency response effort will be directed by the designated lead agency identified in Table IV-1, "Functional Agency Responsibility for Radiological Hazards".

2. Support Agency Coordination

   The local Office of Emergency Management (OEM), with assistance and guidance from the State OEM, will facilitate the lead agency emergency response by coordinating the activities of the other support agencies.

V. APPENDICES

A. General

All hazard specific appendices, even though they are bound and maintained as separate documents, are incorporated by reference and are considered as part of this Annex.

B. List of Topics

No.	Topic
1.	RERP for Commercial Nuclear Power Plant(s)
2.*	Transportation Radiological Accident
3.*	Nuclear Powered Satellite Incident
4.*	Nuclear Terrorism Incident
5.*	Military Nuclear Weapons Accident

C. List of Attachments

1. National Security Emergency
2. Local Responsibilities Matrix
3. Radiological Instrument Set Inventory
4. Roster of Radiological Monitors
5. Individual Radiation Exposure Record

* To be developed

Attachment 1, National Security Emergency

I. INTRODUCTION

The purpose of this Attachment to the local Emergency Operations Plan Radiological Protection Annex is to address the unique demands expected to be generated by a National Security Emergency/Attack/Terrorist Act radiological environmental hazard.

A. Specific Hazard Analysis Summary

In the event that the President of the United States declares a National Security Emergency, there will exist the threat of, or an actual attack situation. Under such circumstances, all or part(s) of the State may become subject to both the direct and/or indirect effects of nuclear weapons.

1. Basis for RADEF Planning

As a basis for planning, the Federal Emergency Management Agency (FEMA) has issued the following publications to provide planning guidance for the development and implementation of both State and local Civil Defense Radiological Defense (RADEF) Systems:

- Civil Preparedness Guide (CPG) 2-1, "Radiological Defense".
- State and Local Guide (SLG) 100, "Guide for Increasing Local Government Civil Defense Readiness During Periods of International Crisis".
- State and Local Guide (SLG) 101, “Guide for All-Hazard Emergency Operations Planning.”

2. Summary Assessment

In the event of a National Security Emergency/Attack/Terrorist situation, there exists a strong potential for a significant fallout radiation hazard. The primary purpose of the State RADEF System, and its local component, is to provide protection from, and guidance on the effects of fallout radiation. Thus, the need for the local RADEF System is established to support state and local continuity of government operations and to provide support with respect to protecting the health and safety of the public not affected by direct weapons effects.

II. SITUATION - RISK AREA

The end of the cold war and collapse of the military alliance between the former Soviet Union and its allies have significantly diminished the possibility of a massive coordinated attack on the United States. Control of a significant portion of the former Soviet Union's nuclear arsenal is in the hands of several independent nations. These nations now chart their own foreign policy and are not obligated to support any military action in which the new "Russia" may become involved. There are now upwards of twenty nations that may possess the capability to use nuclear weapons. However, it is unlikely that any one of them possesses or controls a large enough stockpile of weapons to carry out the kind of massive attack on the United States that was previously envisioned.

Under the current international climate, it is unlikely that an **organized** attack on the United States would occur. However if an attack did occur, areas potentially at risk might include:

⇒ Military installations that **directly** support our nation's nuclear retaliatory capabilities. Such installations may include intercontinental ballistic missile launch facilities, bases that house fixed wing bombers, and those that are involved in command and control of offensive nuclear weapons.

⇒ Large, densely populated metropolitan areas that play a significant role in support of the nation's governmental or financial management activities.

III. PLANNING CONSIDERATIONS - NUCLEAR CONFLICT

Unique planning considerations for a nuclear conflict would need to be addressed in several of the local government's functional annexes. For a radiological hazard it is vital for emergency response personnel to be able to detect and quantify the location and amount of gamma radiation present in the town. Therefore, provisions should be made, as appropriate, to address the following planning considerations in one or more Attachments to this Annex, or integrated into the appropriate functional Annexes.

Referenced below are typical mission/task assignments for those functional annexes.

A. DIRECTION AND CONTROL

Coordinating, when appropriate (during an international crisis, U.S. military intervention overseas, etc.) with the next level of government to obtain essential information concerning:

- Intelligence estimate of the intent of the adversary nations that possess weapons of mass destruction.

- Appropriate increased readiness actions to take and the timing for their implementation.

Ensuring that personnel with expertise in dealing with hazards associated with the nuclear conflict threat are assigned to work in the EOC. Typical tasks may include:

- Advising decision-makers on the scope of the radiological hazards.
- Determining when it would be appropriate to distribute radiological instruments to emergency response organizations and mass care facility management teams.
- Disseminating essential radiological information to emergency response personnel and shelter management teams.
- Analyzing radiological information reported by emergency response teams and facility managers. Then:
    - ◊ Determine the relevant exposure data of shelter occupants and personnel performing emergency response duties and ensure that this information is tracked and recorded.
    - ◊ Implement a procedure that would limit the exposure of personnel performing emergency response duties.
    - ◊ Ensure facilities and areas that must be inhabited or used by humans are monitored and decontaminated, if appropriate.
    - ◊ Ensure facilities and areas that are unsafe for human use are identified.
    - ◊ Ensure people remain sheltered (in their mass care facility or risk area shelter) until the gamma radiation hazard has passed.
    - ◊ Determine the appropriate time to allow evacuees and the general public to leave mass care facilities.

B. WARNING

Warning the public is a critical function related to this hazard. Lead-time is necessary to make the arrangements needed to ensure the people that are located in risk areas evacuate or seek shelter. Approximately 48 or more hours may be needed to carry out the necessary actions to ensure the public is protected from this hazard. The following planning consider-ations should be addressed, if appropriate, in this Attachment or the local Warning Annex.

- Coordination with the next level of government, when appropriate, (during international crisis, U.S. military intervention overseas, etc.) to obtain information concerning the appropriate time to disseminate warning.

- Use of a town-wide warning system to disseminate timely warning to the public and members of the emergency response organization.

C. EMERGENCY PUBLIC INFORMATION

A nuclear conflict planning consideration should be addressed, if appropriate, in this Attachment, or in the local EPI Annex, addressing survival tips for people living in town's vulnerable to nuclear effects who choose to shelter themselves in their homes.

D. EVACUATION

Evacuation is the primary protective action option that should be used to protect people from this hazard. The information gained from the risk assessment should be used to develop the planning instructions that will be relied upon to carry out an evacuation of those people at risk to direct weapons effects. These planning instructions detail the time-phased actions to be taken to evacuate people and relocate, if practical, essential services, special custodial facilities, and government resources from the risk area. All actions must be completed before a nuclear detonation occurs. For this reason, a nuclear conflict attachment to the Evacuation Annex should address the clearance times needed to conduct a safe and timely evacuation of the population at risk.

Since a jurisdiction cannot guarantee that it will receive warning in time to evacuate fully, provisions should be made for **relocation within the risk area** of the public at risk in situations where the warning comes too late to permit evacuation. The following needs should be addressed:

- **Facilities**. Provisions should be made to:

  ⇒ Identify the facilities in the risk area that:

    ◊ Offer the best protection available.

    ◊ Can be used to house large numbers of people.

- **Special Equipment**. Provisions should be made to:

  ⇒ Move radiac meters and dosimeters (that can be used to detect and measure gamma radiation) to those facilities selected for use as shelters within the risk area.

  ⇒ Ensure members of the facility management team can operate available radiological detection and decontamination equipment.

  ⇒ Ensure that mass care facility management team members are assigned to work at any shelter facility to be opened within the risk area, if their facility is not scheduled to be opened

- **Decontamination**. Ensure members of each facility management team are familiar with procedures for decontaminating people and the shelter.

E. MASS CARE

The following planning considerations should be addressed, if appropriate, in this Attachment, or one or more Appendices to a Mass Care (shelter) Annex.

- Ensure facilities designated for use are located outside of the area vulnerable to direct weapons effects.

- Tabs should be used to reflect key information (protection factor, capacity, cooking, sleeping, water, medical, recreational capabilities, telephone numbers, point of contact for access, etc.) associated with each facility.

- If facilities are located outside of the town's boundaries, coordinate with adjacent jurisdiction(s) to arrange space for evacuees.

- Identify mass care facilities suitable for housing custodial care groups.

- Ensure the facilities designated for use provide protection from gamma radiation to shelter occupants.

- Ensure provisions have been made regarding necessary special equipment.

- Move radiac meters and dosimeters (that can be used to detect and measure gamma radiation) to those mass care facilities that have been selected for opening.

- Ensure members of the facility management team can operate available radiological detection and decontamination equipment

  ⇒ Ensure members of each mass care facility management team are familiar with procedures for decontaminating people and the facility.

F. HEALTH AND MEDICAL

The following planning considerations should be addressed, if appropriate, in this Attachment or one or more appendices to the Health and Medical Annex.

- Provisions for determining the levels of radiation exposure of exposed people.
- Designating facilities that:

  ⇒ Have the capability to decontaminate and medically treat people exposed to radiation.

  ⇒ Dispose of contaminated items (clothing, medical supplies, and other waste items).

- Provisions for continued medical surveillance of personnel performing essential operational tasks.

G. RESOURCE MANAGEMENT

The following planning considerations should be addressed, if appropriate in this Attachment, or one or more appendices to a Resource Management Annex.

- Provisions for purchasing, stockpiling, or otherwise obtaining essential gamma radiation detection devices for use in shelters within the risk area and in mass care facilities.
- Provisions for purchasing, stockpiling, or otherwise obtaining the essential stocks (food, water, medical, etc.) needed to support an extended stay (3-14 days) in shelters within the risk area or in mass care facilities.

Attachment 2

TABLE IV.1

FUNCTIONAL LOCAL AGENCY RESPONSIBILITIES FOR RADIOLOGICAL HAZARDS

Attachment 3

RADIOLOGICAL INSTRUMENT SET INVENTORY

Page _____ of _____

Attachment 4

ROSTER OF RADIOLOGICAL MONITORS

Date of last update: _____ Page _____ of _____

	Name	Address	Telephone #	Training Date
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Attachment 5

INDIVIDUAL RADIATION EXPOSURE RECORD

Page _____ of _____

Name: _____ Age: _____ Years Old

Address: _____ SSN: _____

_____ Authorized Exposure/Dose: _ R.

Incident/Location: _____ Incident Date: _____